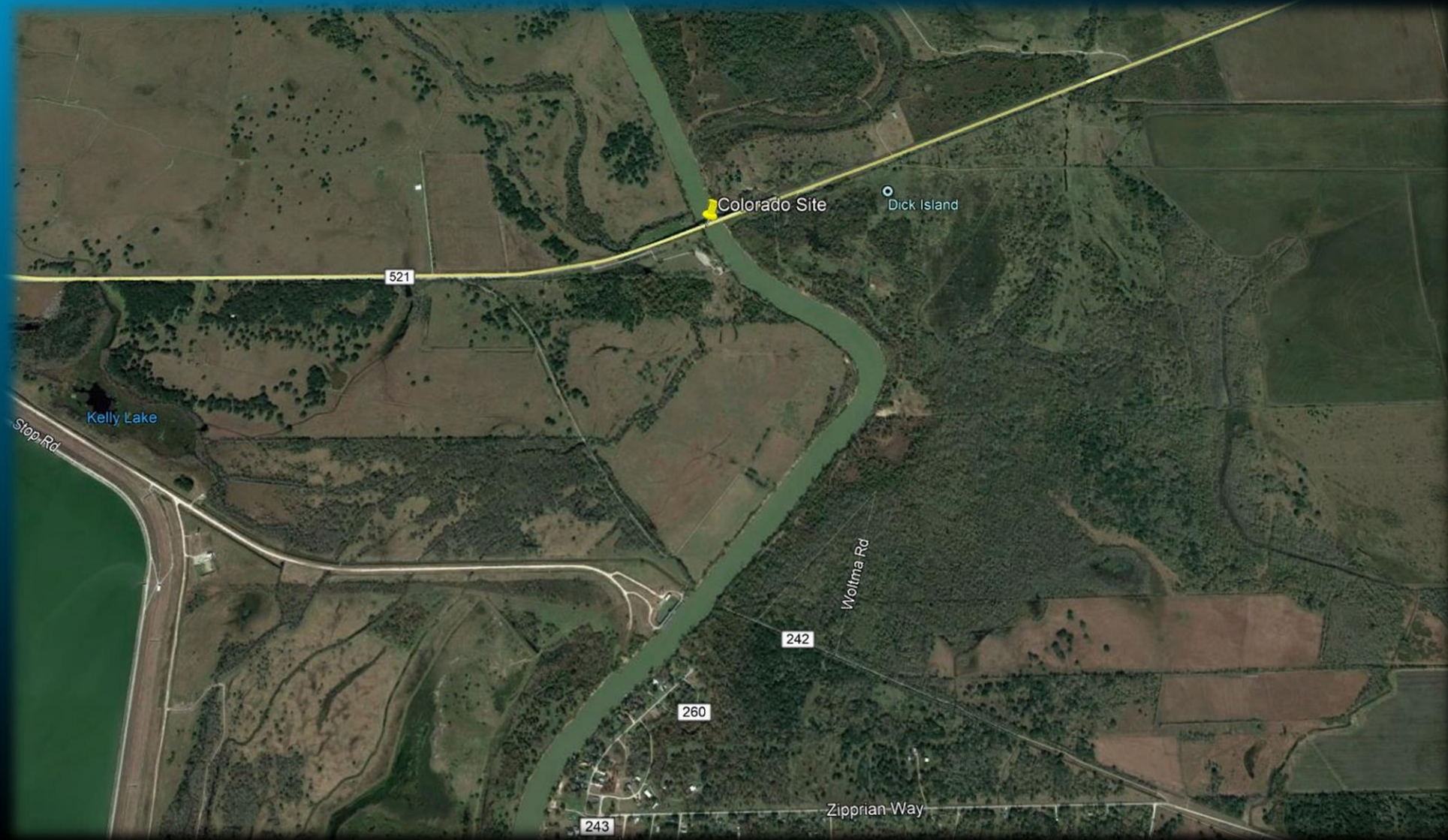


U. S. Geological Survey:

*Evaluate the variability of sediment
and nutrient loading into
Matagorda Bay*

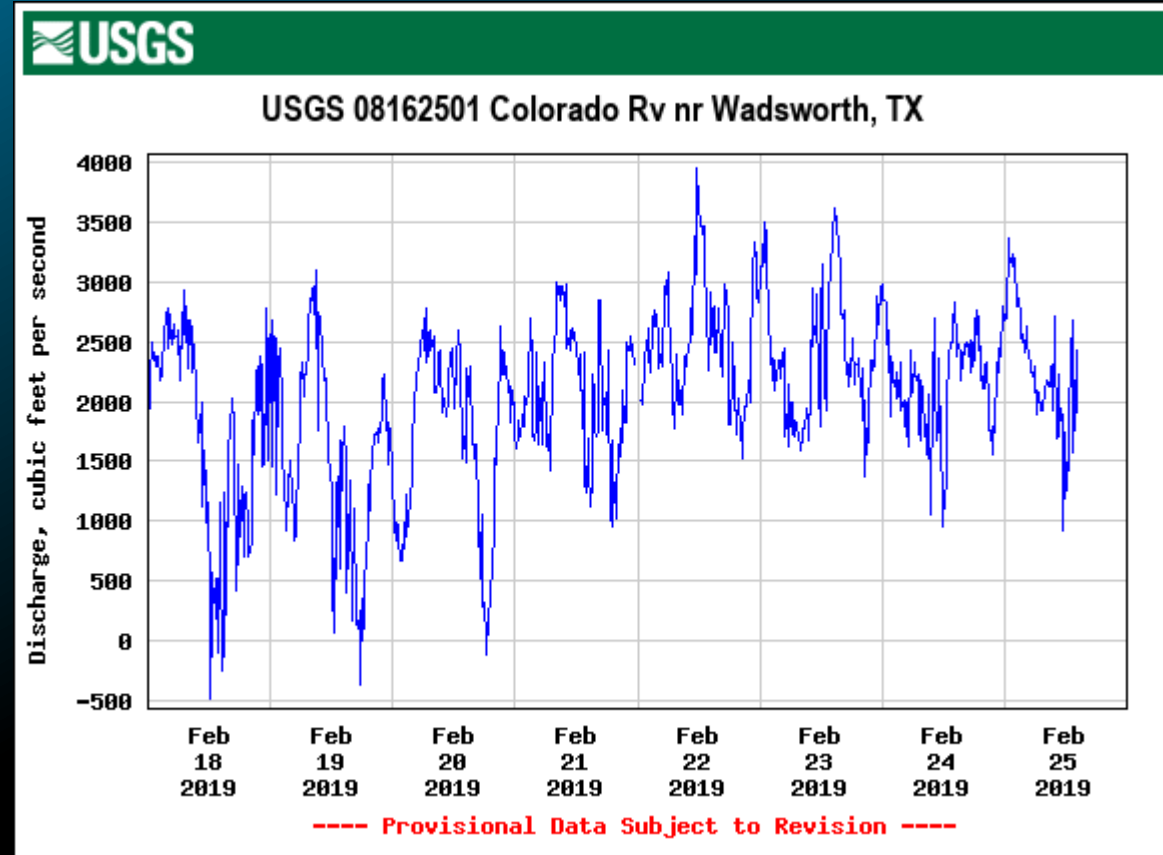
Michael T. Lee
U.S. Geological Survey
Texas Water Science Center
Coastal Science Program Coordinator
mtlee@usgs.gov
936-271-5313

USGS 08162501 Colorado Rv nr Wadsworth, TX



Task A:

- ▣ Install, operate, and maintain an index-velocity gage at USGS station 08162501, Colorado River near Wadsworth, Texas. This will include the collection of discharge measurements for validation and documentation of possible changes over time. This will include the development of an index velocity rating at the established site. USGS will continue operation and maintenance of the index-velocity gage through this contract period.

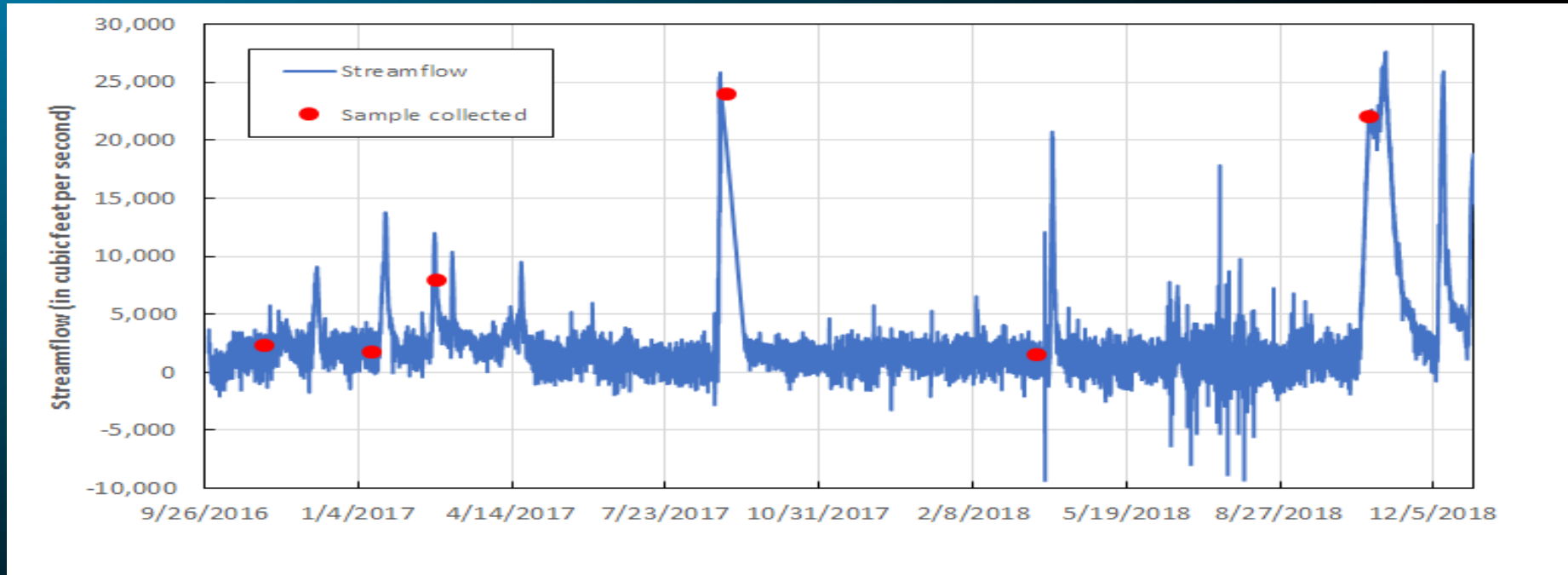


- Over 50 discharge measurements at the location
- 24 measurements (and counting) to develop and maintain the index velocity rating
- <http://waterdata.usgs.gov/nwis>

Task B:

- ▣ Periodically and during high flow events to be determined based on an evaluation of historical measurements of discharge on the Colorado River, measure discharge and collect water quality, nutrient, and sediment samples at the location of the index-velocity gage as funds allow. As well, collect periodic bed material samples at selected river discharges as a preliminary evaluation of bedload sediment contribution to total sediment discharges

Sample Collection



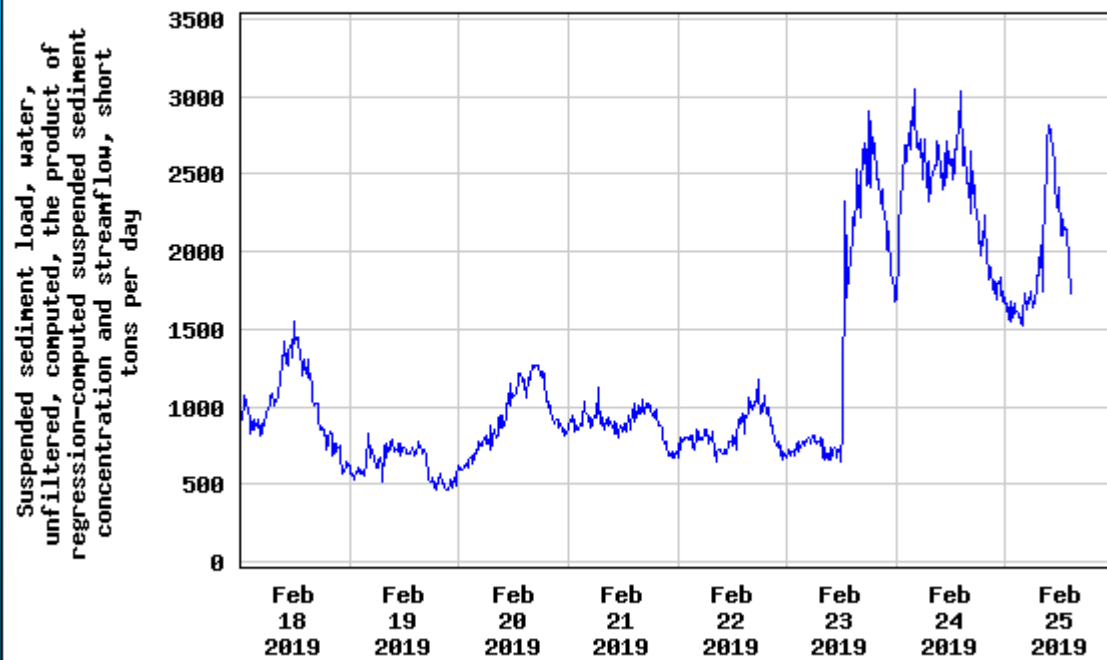
- Over 30 samples collected at the location
- Need to focus future study on more sample collection now that Index Velocity Meter is in place

Task C:

- ▣ Continue to develop the relationship between measures of optical turbidity and acoustic backscatter to further support development of the surrogate methodology for monitoring sediment and nutrient loads to estuaries on a continuous basis.



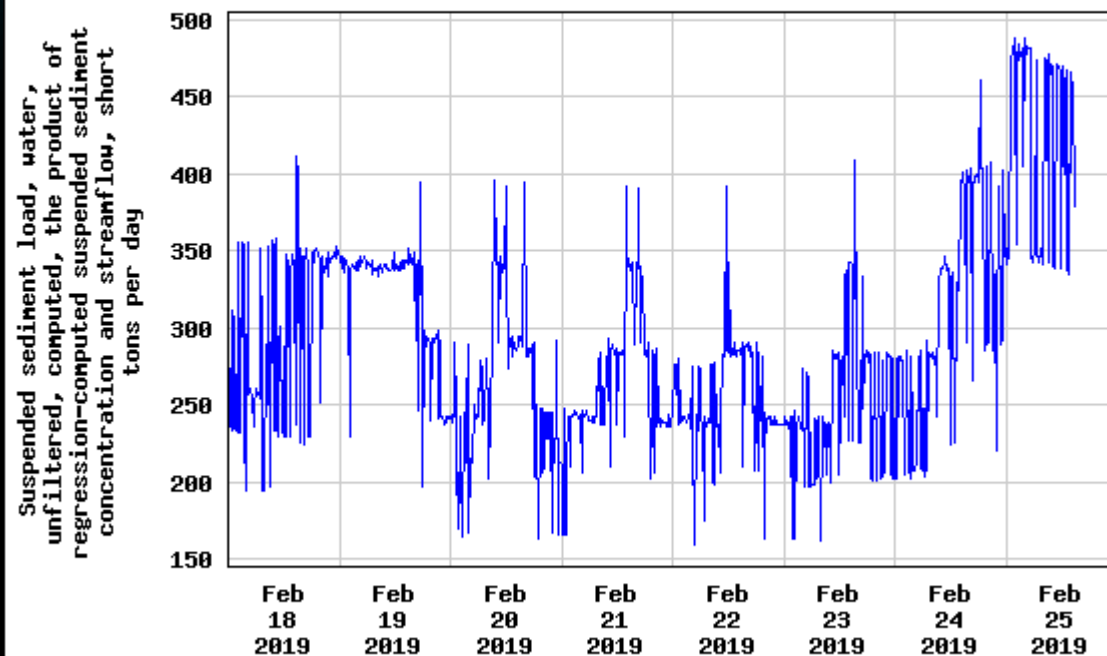
USGS 08067252 Trinity Rv at Wallisville, TX




----- Provisional Data Subject to Revision -----




USGS 08188810 Guadalupe Rv at SH 35 nr Tivoli, TX



----- Provisional Data Subject to Revision -----


Texas Coastal Watersheds Dashboard
Project Overview
Data by Watershed

Evaluating Freshwater Inflow and Nutrient and Sediment Loading into Bays and Estuaries in Texas



The U.S. Geological Survey (USGS), in cooperation with the Texas Water Development Board and the Galveston Bay Estuary Program, monitors nutrient and sediment concentrations and loads entering Texas bays and estuaries over a range of hydrologic conditions in five major River systems: Trinity River, Colorado River, San Jacinto River, Guadalupe-San Antonio River, and Nueces River. Streamflow is measured through index-velocity techniques and water-quality samples are collected during high flow and base flow conditions to improve our understanding of the quantity and quality of freshwater inflow to Texas bays and estuaries. Surrogate regressions are also developed to obtain a continuous record of sediment and nutrient concentrations in these watersheds.




Study Objectives

- Evaluate the variability of streamflow and nutrient and sediment concentrations and loads in the lower reaches of rivers entering Texas bays and estuaries.
- Determine correlations between acoustic backscatter and nutrient and sediment concentrations to develop a real-time continuous record of these constituents for each watershed.
- Estimate nutrient and sediment loading to bays and estuaries in the Texas Gulf Coast using continuous data from streamflow-gaging stations and surrogate models.


Links to Publications

- Characterization of streamflow, suspended sediment, and nutrients entering Galveston Bay from the Trinity River, Texas, May 2014–December 2015
Scientific Investigations Report 2016-5177
- Evaluating the Variability of Sediment and Nutrient Loading from Riverine Systems into Texas Estuaries and Bays
Fact Sheet 2011-3036
- Sediment acoustic index method for computing continuous suspended-sediment concentrations
Techniques and Methods 3-C5
- Estimating Suspended Sediment in Rivers Using Acoustic Doppler Meters

Partners

<https://zlucena.shinyapps.io/CoastalDashboard/#section-project-overview>


Texas Coastal Watersheds Dashboard
Project Overview
Data by Watershed


Select Watershed
Colorado River
Trinity River
San Jacinto River
Guadalupe River
Nueces River
Colorado River

Links to Available Real-Time Data:
Trinity River
Guadalupe River
Colorado River

Watershed Data Table
Show 15 entries
Search:

Station Number	Station Name	Basin	Sample Date	Sample Time	Stream f
08162501	Colorado Rv nr Wadsworth, TX	Colorado River	2012-02-21	12:20	
08162501	Colorado Rv nr Wadsworth, TX	Colorado River	2012-03-14	12:13	
08162501	Colorado Rv nr Wadsworth, TX	Colorado River	2013-01-11	13:37	
08162501	Colorado Rv nr Wadsworth, TX	Colorado River	2013-03-19	12:25	
08162501	Colorado Rv nr Wadsworth, TX	Colorado River	2013-08-01	12:15	
08162501	Colorado Rv nr Wadsworth, TX	Colorado River	2013-10-18	13:10	
08162501	Colorado Rv nr Wadsworth, TX	Colorado River	2013-11-03	13:50	
08162501	Colorado Rv nr Wadsworth, TX	Colorado River	2013-11-03	17:45	
08162501	Colorado Rv nr Wadsworth, TX	Colorado River	2013-11-04	10:30	
08162501	Colorado Rv nr Wadsworth, TX	Colorado River	2013-11-04	14:05	
08162501	Colorado Rv nr Wadsworth, TX	Colorado River	2013-11-04	16:45	
08162501	Colorado Rv nr Wadsworth, TX	Colorado River	2013-11-05	10:30	
08162501	Colorado Rv nr Wadsworth, TX	Colorado River	2013-12-17	12:39	
08162501	Colorado Rv nr Wadsworth, TX	Colorado River	2014-01-14	12:55	
08162501	Colorado Rv nr Wadsworth, TX	Colorado River	2014-03-19	12:57	

Showing 1 to 15 of 31 entries
Previous 1 2 3 Next

Station Map


14-day Hydrograph
USGS Station 08162501 Colorado River near Wadsworth
